



## BIOLOGICAL ANTHROPOLOGY

## The State of Biological Anthropology in 2008: Is Our Discipline Strong and Our Cause Just?

**ABSTRACT** Biological anthropologists inform a largely professional discourse on the evolutionary history of our species. In addition, aspects of our biology, the ways in which we vary, and certain patterns of behavior are the subjects of a more public and popular conversation. The social contexts in which we work not only define our times but also produce the anthropologists that in turn construct an emergent understanding of our species' (and our societies') inner workings. In this review of scholarly production, I focus on developments within a selection of "sub-subdisciplines" that were particularly influential in bending the arc of biological anthropology in 2008, namely: evolutionary medical anthropology, anthropological neuroscience, forensic anthropology, primatology, and paleoanthropology. Ultimately, this review demonstrates, yet again, anthropology's great contribution: the ability to incorporate new technologies and research methodologies into a synthetic and integrative interdisciplinary approach toward the elucidation of human behavior, evolution, and biocultural engagements with the environment. [Keywords: biological anthropology, year in review, 2008, science and society]

**C**HARGED WITH FILTERING and summarizing the past year's important developments in biological anthropology, including its constituent realms (e.g., paleoanthropology, evolutionary medical anthropology, primatology), I want to pause for a moment to look both ways down the two-way "street of influence" that is the social context of biological anthropology.<sup>1</sup> Why bother? Some practitioners of our discipline will respond with "don't," explaining that our focus and expertise lie in the realm of objective science. In the historical specificity of 2008 and beyond, anthropologists will document, analyze, and incorporate a myriad of connections between their work and the circumstances of the U.S. presidential election. The campaign's symbolic message of "change" (and its primary messenger) resonated with the mood of the country, while the much-lauded campaign strategy (combining new technologies and old-fashioned organizing principles) brought the message to an expanded electorate. Long-developing crises of capitalism on a global scale—manifested in the forms of war, rising unemployment and growing inequality, financial collapse, and continued environmental degradation—

define our times and, in turn, produce the anthropologists who then construct our current understanding of the world's inner workings, including biological anthropologists. By definition, biological anthropology is relevant to human societies, and concomitantly the social context of its practitioners is relevant to the work they collectively submit, review, publish, and present.

Faced with the difficult task of condensing a year's worth of production by many hundreds (if not thousands) of biological anthropologists, I felt it necessary to craft a thematic lens in which to view the scholarly works of my peers.<sup>2</sup> In service to the thematic frame, I have sought contributions that have the potential to engage with issues of current social saliency. To provide some structure to this review, I have decided to focus specifically on developments within a selection of "sub-subdisciplines" that were particularly influential in bending the arc of biological anthropology in 2008, namely: evolutionary medical anthropology, anthropological neuroscience, forensic anthropology, primatology, and paleoanthropology. It is my hope that I have succeeded in doing justice to both the specific expertise and

the broad scope of our practitioners' scholarly activities, for it is the sophisticated and eloquent application of research methodologies that characterize biological anthropology's ability to address questions on an epic scale. In search of excellence within these realms, one discovers an embarrassment of riches in 2008.

### EVOLUTIONARY MEDICAL ANTHROPOLOGY

The publication *Evolutionary Medicine and Health: New Perspectives* (Trevathan et al. 2008) is indicative of the trend toward expansion of biological and evolutionary inroads into the realm of social saliency. The volume consists of 23 chapters, featuring the contributions of over 40 authors, and is meant to directly impact the efficacy of health care. Indeed, in the editors' own words:

It is our belief and the belief of the contributors to this volume that only when clinicians and researchers take into account the role of evolution in shaping the organism being treated as well as, in many cases, the organism causing the problem or the condition will we achieve something that approaches sustainable health care for all people. [2008:53]

The major leap forward from its earlier iteration, *Evolutionary Medicine* (Trevathan et al. 1999), itself a consequential volume, is the explicit incorporation of political and economic variables in the analyses of nutrition, sex and reproduction, disease, stress, social relationships, and behavior within the complex environmental milieu encompassing contemporary human health. Many of the chapters incorporate epidemiological and ethnographic methods into a biocultural framework to strengthen the link between evolutionary and sociocultural processes.<sup>3</sup> In doing so, the volume offers both logical and data-driven support for an increased relevancy and connectivity between biological anthropology (and biological anthropologists) and social responsibility (e.g., as stressful or unequal environments interact with evolutionary systems and short-term behavioral strategies).

A notable contribution to this volume is Carol M. Worthman's (Emory University) chapter titled *After Dark: The Evolutionary Ecology of Human Sleep*. Worthman provides a detailed overview of sleep ecology and the role of sleep in human evolution. Understanding the patterns of sleep and its antitheses (sleep loss, disruption, and deprivation) from both comparative evolutionary as well as ethnographic perspectives is increasingly critical as globalization and modernization transform variables on spectacular (e.g., demands for activity around the clock) and subtle (e.g., erosion of cosleeping practices) scales. Worthman considers "how the newly configured material, social, and psychological contexts of sleep may exert not only direct effects on sleep behaviors and related health problems, but also indirect ones through interactions with lifestyle-defining macrosocietal shifts in technology, labor, and social structure" (2008:292). Through Worthman's evolutionary analysis and detailed literature review, the relational complex

comprised of chronic stress (attributable to poor or insecure environments), chronic sleep disruption (attributable to an adaptive response for vigilance and mobilization), and increased risk to physical and mental health is supported from multiple lines of evidence. The significance of connecting inequalities in human health to inequalities in human societies again demonstrates the scope of biological anthropology in the new millennium.

In addition to the aforementioned edited volume, the medical anthropology community was energized by convening for the Spring 2008 Society for Medical Anthropology (SMA) meeting, a joint meeting with the Society for Applied Anthropology, in Memphis, Tennessee (March 25–29, 2008), featuring 28 organized symposia and 19 volunteered sessions. The plenary session, titled "The Political Construction of Global Infectious Disease Crises," is further indication of the direction of medical anthropology in 2008 and beyond. In the words of Ruthbeth Finerman (University of Memphis), Program Chair for the meeting, the plenary session "illuminates the roles of culture, globalization and political maneuvering in health policy, funding priorities, and public awareness in the face of global epidemics. The topic is especially timely for the U.S., as the current election year could profoundly change the political landscape for addressing national and international health" (Finerman 2008).

### ANTHROPOLOGICAL NEUROSCIENCE

One of anthropology's greatest qualities is to incorporate new technologies and research methodologies into a synthetic and integrative interdisciplinary approach toward the elucidation of human behavior, evolution, and biocultural engagements with the environment. Additionally, in studying ourselves, anthropology is inherently narcissistic and therefore fuels discussions surrounding our work, our approach, and the meaning of categorical labels. Categorization is necessary for pursuing manageable research questions within established theoretical frames, yet it simultaneously erects walls that prevent the realization of integrative approaches to understand emergent, dynamic phenomena. All of these considerations are evident within the realm of anthropological neuroscience, or neuroanthropology. This emerging arena can be viewed as a synthesis of neuroscience and anthropology, a biocultural integration of brain function and social niche construction, and a critical response to reductionist views of the brain's central role in human behavior.

In 2008, Greg Downey (Macquarie University, Australia), Daniel Lende (University of Notre Dame), and colleagues engaged the "encultured brain and body" at both the American Anthropological Association's 107th Annual Meeting in San Francisco, California (November 19–23, 2008), and on the Internet in weblog format ([www.neuroanthropology.net](http://www.neuroanthropology.net)). At the AAA meeting, Downey and Lende convened a two-session panel entitled "The Encultured Brain: Neuroanthropology and Interdisciplinary

Engagement," which brought together 11 participants and three discussants to address recent findings and methodologies in the neurosciences and anthropology toward the elucidation of human behavior, culture, and development. Participants presented research from an eclectic mix of theoretical, comparative, or methodological perspectives, including but not limited to the following: autism and religious development (Rachel S. Brezis [University of Chicago]); ethnopsychologies and children's theory of mind (Harold L. Odden [Indiana University–Purdue University, Fort Wayne]); emotional responses to social threats (Ryan Brown [Northwestern University]); primate social cognition, human evolution, and niche construction (Katherine C. MacKinnon [St. Louis University] and Agustín Fuentes [University of Notre Dame]); and the comparative neuroanthropology of equilibrium in sports and dance (George Downey [Macquarie University, Australia]). Discussants Naomi Quinn (Duke University) and Robert Sapolsky (Stanford University) encouraged the participants to develop a common set of core (guiding) principles for the focused advancement of this innovative field and to embrace an emerging view of neural properties (e.g., plasticity and connectivity), while cautioning against foregoing anthropology's strengths (i.e., fieldwork and interpretations of behavior in natural and social settings) in favor of neuroscience's perceived technical wizardry.

In a substantial and complementary contribution to anthropological neuroscience, James K. Rilling (Emory University) published both an overview of neuroscience's basic concepts and terminology, methods, and applications and a synthesis of revelations pertinent to anthropological topics in the *Yearbook of Physical Anthropology* (2008). The merits of Rilling's (and many other's) work is the movement toward "understanding the characteristics of our brains that define us as human beings" (2008:26). When combined with a comparative approach (e.g., primates as mammals; humans as primates), the potential to glean insight into language and communication, tool use and manufacturing, altruism, and mental self-projection via neuroscientific methods is promising. Finally, advancements in our understanding of the mechanisms of brain development and functioning reveal "important qualitative differences between human and other primate brains ... the boundary between dorsal and ventral brain structures may have been shifted in human evolution" (Rilling 2008:26). Unfortunately, until the majority of these technologies (e.g., MRI scanners) are accessible, portable, and not cost prohibitive, most research samples will be largely limited to postmortem brains.

#### **FORENSIC ANTHROPOLOGY AND NEW TECHNIQUES IN MORPHOLOGICAL ANALYSES**

In the 2008 *Yearbook of Physical Anthropology*, Dennis C. Dirkmaat (Mercyhurst College) and coauthors, reminiscent of Mehmet Yaşcar Işcan's (1988) seminal contribution from 20 years earlier, strongly make the case that "changes in the

conceptual framework, paired with the emergent properties arising from the solidification of these new perspectives in the field (forensic anthropology), have resulted in a genuine paradigm shift, in the Kuhnian sense of the term" (2008:34). At the structural core, it is argued, of this scientific revolution are developments (both methodological and theoretical) within the realm of forensic taphonomy. Subsequently, the application of forensic taphonomy toward the goal of elucidating human behavior (as a taphonomic agent), rather than other processes and agents that affect remains in situ (e.g., animals, plants, gravity, soils), is a conceptual breakthrough that permits increased legitimacy, applicability, and saliency for anthropological research. Indeed, the authors state:

With the addition of forensic taphonomy, which requires the careful consideration of context and allows for scientific-based reconstructions of past events, forensic anthropology can now take its rightful place alongside other healthy and vigorous scientific disciplines both within and beyond physical anthropology. [Dirkmaat et al. 2008:48]

Also published in 2008, and complementing the aforementioned review article, are the following important volumes: B. J. Adams and J. E. Byrd's (eds.) *Recovery, Analysis, and Identification of Commingled Human Remains* and C. W. Schmidt and S. A. Symes's (eds.) *The Analysis of Burned Human Remains*. Taken as a whole, these developments enhance the ability of practitioners to deliver anthropological perspectives to issues of violence, war, and genocide in our societies.

In a similar analytical breakthrough, Andrea Cardini (Università di Modena e Reggio Emilia, Italy) and Sarah Elton (University of Hull, United Kingdom) published a series of technically sophisticated, morphological analyses in 2008 (Cardini and Elton 2008a, 2008b, 2008c). Morphological analyses, especially relevant to modeling the evolution of fossil species, are greatly enhanced by the use of 3-D morphometric techniques toward the elucidation of phylogenetic, ontogenetic, and biogeographic relationships. Cardini and Elton's success with computerized morphometric techniques, specifically the partitioning of variability into functional and developmental modules (FDMs), permits researchers to focus on more informative anatomical regions with respect to phylogeny (i.e., regions less susceptible to epigenetic factors). Although their discovery of correlations between, and evolutionary significance of, size differences and shape distances is based on large samples of cercopithecine monkeys, the technical refinements and evolutionary lessons hold important promise for understanding human variation and relevant facets of human evolution, respectively.

#### **PALEOANTHROPOLOGY**

The past year bore witness to vigorous debate surrounding classic, fundamental questions (e.g., evolution of hominin bipedalism) as well as recently emerging puzzles in

paleoanthropology (e.g., interpretation of the Liang Bua skeletons and justification and explanation of the recently classified hominin species *Homo floresiensis*). With respect to the former, William Harcourt-Smith (American Museum of Natural History) and Elizabeth Harmon (Hunter College, City University of New York) convened a session dedicated to the origins of bipedalism, one of the defining characteristics of the hominin lineage, at the annual meeting of the American Association of Physical Anthropologists (AAPA) in Columbus, Ohio (April 9–12, 2008). Participants presented new data from multiple lines of evidence, including comparative neurobiology (D. A. Raichlen [University of Arizona] and coauthors), functional morphology (e.g., K. D’Août [University of Antwerp] and coauthors), and paleoecology (e.g., K. E. Reed and C. J. Campianso [Institute of Human Origins]).

Herman Pontzer (Washington University) and coauthors experimentally investigated endurance capabilities (as measured as maximum sustainable speed) for habitual quadrupeds in both quadrupedal and bipedal walking trials. Their results suggest that the evolutionary transition from a chimpanzee-like form of quadrupedalism to a humanlike bipedality would be marked by a decrease in endurance capabilities. Subsequently, their results compel them to posit a decrease, rather than increase, in daily travel for early bipeds. Future research and modeling of early hominin behavior may demonstrate the relevancy of endurance and ranging, especially as it may relate to persistence hunting, another potential driver of human evolution. In late 2008, Louis Liebenberg (Harvard University) discussed this very issue, on the basis of ethnographic research and the historical and ecological contexts of a modern gathering-hunting people, in the *Journal of Human Evolution*.

In addition to published contributions to the literature (e.g., Martinez and Hamsici 2008) and several very recent in press (available online) submissions (e.g., Baab and McNulty in press; Jungers et al. in press; Larson et al. in press; van den Bergh et al. in press), the *H. floresiensis* debate was on display at the AAPA meeting in Columbus, Ohio. A lively exchange before overflow crowds between R. B. Eckhardt (Pennsylvania State University) and D. Falk (Florida State University) and coauthors assessed the scientific merit of a new variant of the “pathological” explanation for the enigmatic, diminutive type specimen (LB1). Specifically, Eckhardt’s morphological analysis reveals patterns consistent with Laron Syndrome (LS), a developmental pathology characterized by insensitivity to growth hormone. However, Falk and coauthors, as well as A. B. Schaubert (Florida State University), approach the problem from multiple lines of evidence (comparative morphological analyses and developmental genetics), refute the LS pathology hypotheses, and provide alternative explanations, including the following: (1) descent from a similarly small-brained, small-bodied, australopithecine-like ancestor or (2) the proportionally dwarfed descendent of a larger-bodied ancestor with similar relationships between brain size and body size.

The anthropological community awaits further resolution on this important issue, for at stake is not only the justification of “hominin species status” for the recent fossil finds but also the potential to affect our understanding of dispersal scenarios near the Pliocene–Pleistocene boundary.

### PRIMATOLOGY, HUMAN EVOLUTION, AND PRIMATE CONSERVATION

In 2008, primatologists gathered to present papers in large numbers at the annual or biennial meetings of three major organizations (American Association of Physical Anthropologists [AAPA], American Society of Primatologists [ASP], and International Primatological Society [IPS]) and published hundreds of articles in an array of professional journals. Many of these contributions are within the realm of primate socioecology. Socioecological studies attempt to explain the mechanisms by which variation in ecological factors—such as the abundance, quality, and distribution of food as well as predation pressure—alter the demography and social relationships within groups. This approach is often invoked to help explain and model the evolution of social systems and provides a comparative framework for contextualizing data relevant to the emergence of our own lineage. In applying this classic theoretical framework, scientists search for the social and ecological manifestations of sensitivity to the aforementioned variables among closely related species or, more recently, among populations within the same species. As our research methods refine and the number of overall studies increase, our interpretations, somewhat paradoxically, are simultaneously more informed—yet less absolute—within an analytical framework that prefers categorization and clearly defined states to the emergent construction of adaptive peaks on a landscape continuously being constructed and modified by organism and environmental systems’ interactions.

Primate-focused papers at the 77th Annual Meeting of the AAPA contributed approximately 30 percent to the overall scientific program. Through their research and reporting efforts, primatologists added both nuanced understanding to long-studied species of nonhuman primates as well as breadth to the comparative database by presenting findings from relatively little-studied or recently discovered species, subspecies, or populations of nonhuman primates. Adding factors to the existing socioecological model (but also with implications for morphology) were 14 papers organized into a symposium on “The Importance of Fallback Foods in Primate Ecology and Evolution” by Barth Wright (Kansas City University of Medicine and Biosciences) and Paul Constantino (George Washington University). The impact of fallback foods (those consumed in inverse proportion to preferred food availability) on primate foraging adaptability, dietary partitioning, sociality and demography, and models of early hominin evolution were examined. As a more comprehensive review of this symposium (as part of a review of the 77th Annual Meeting of the AAPA,

in general) was recently published in *Evolution Anthropology* (Wallace et al. 2008), suffice it to say that developing uniform methodologies for evaluating the impact of fallback foods will be a necessary benchmark and, indeed, was a stated goal of the symposium (a goal that was certainly advanced during the session). The greater challenge, of course, will be the generation of an operational definition that facilitates strong, testable predictions and ultimately the incorporation of fallback foods into a synthetic model of primate socioecology and evolution.

But what if the current synthetic model is already compromised by equivocal fieldwork results, inter- and intraspecific variations in response to similar ecological factors, and the role of phylogenetic constraint (contra an evolved equilibrium to environmental trade-offs)? If so, what options exist, if any, for refining the model? Should rejection of the model be an option? These are precisely the questions addressed by Bernard Thierry (Université de Strasbourg, France) in *Evolutionary Anthropology* (2008). Specifically, Thierry writes:

But what if primate societies were far from optimal? Societies are integrated systems made of multiple relations that individuals generate through interaction processes. Such interconnections limit the number of structures that can be realized, thus exerting strong stabilizing selection that opposes the adaptive changes possibly required by the ecological milieu. This may explain why phylogenetic relatedness constrains species' ecological characteristics and predicts a fair amount of social diversity. [2008:95]

Refinements of definitions and measurements (e.g., resource quality, quantity, dispersion, and depletion) are positive in their own right, but the jury will remain out on whether or not refinements will move us in the direction of generalized, explanatory model of primate social diversity.

Thierry himself favors a rejection of the search for a unifying, comprehensive model encompassing all primate societies. He contextualizes his position, noting, "This will hardly surprise social anthropologists who have for long said goodbye to unification hopes. Ecologists, having faith in our ability to reduce the whole range of social complexity to a limited number of adaptive rules, may find this harder to swallow" (Thierry 2008:96). While maintaining the goal of generating testable hypotheses for the evolution of social systems in primates, including hominins, the field of primate socioecology is moving away from categorical or typological thinking about social organization and toward an integrative approach reflective of observed variation and positioned to account for historical contingencies. These advancements are consistent with trends emerging within the other anthropological subdisciplines as well.

The Primate Society of Great Britain hosted the 22nd Congress of the International Primatological Society (IPS) in Edinburgh, Scotland, United Kingdom (August 3–8, 2008). As always, the focal point of this biennial congress is the exceptional scientific program, replete with nearly 900 oral

and poster presentations from delegates representing over 50 countries. In addition, six associated satellite workshops were conducted, including the following: methods training (collection and analysis of field data for estimation of primate density or abundance and comparative functional morphology); addressing pertinent issues in conservation and primate welfare (a conservation education forum, husbandry training, and understanding macaque–human commensalism); and finally, a primatology film competition (first place in the professional category went to *Bonobos—Missing in Action* [Greenwood 2006]).

A highlight of the proceedings was the five consecutive days of plenary lectures by prominent scholars in the discipline. Louise Barrett's (University of Lethbridge, Canada) exceptional plenary talk, informed by long-term research on the natural history of baboons, clearly demonstrated the level of nuance required to understand the differences within a diverse taxonomic category, evidentiary of local ecological adaptations and complex (and contingent) evolutionary histories. The apt consideration of the social basis of primate cognition, whereby social affordances enable the emergence of other behavioral forms through a process of social niche construction, will greatly enhance our understanding of behavior in nonhuman primates. Furthermore, this perspective is a prime example of how the long-term study of nonhuman primates enhances theory in evolutionary biology, with special relevance for models of human evolution.

This year's IPS congress featured a two-part symposium on the "Context of Being Human: Social Behaviour of Early Hominins from the Perspective of Primate Socioecology" conceived of by J. Michael Plavcan (University of Arkansas) and Charlie Lockwood (University College London, United Kingdom). The symposium was successful in encouraging cross-disciplinary interaction between primate behavioral ecologists and paleoanthropologists, with the specific goal of applying current models of primate behavioral ecology to the earliest members of our own lineage. In doing so, investigations of both the commonalities and unique features of human behavioral evolution are facilitated. Standout contributions encompassing the ecological and cognitive constraints on early hominid sociality (R. I. M. Dunbar and C. Bettridge [University of Oxford, United Kingdom]) and the *Australopithecus–Homo* transition (E. H. M. Sterck [Utrecht University, the Netherlands]) paid homage to the tragic, preconference death of Charlie Lockwood (see *In Memoriam*, below).

As always, conservation and the state of the planet's nonhuman primate populations are a main topic of concern for IPS congressional delegates, which include many primate-habitat country conservationists, researchers, and students. These are the folks, when prominent academics discuss the merits of international primate research and tourism programs in the context of primate conservation, who shoulder the heavy loads in good times and bad, often placing their lives and livelihoods on the front lines to

protect populations of endangered primates. With approximately 50 percent of the world's 600-plus primate taxa at risk of extinction from such varied threats as illegal bushmeat hunting and live animal trades, habitat destruction and degradation, small-population demographic processes, and a long list of emerging extractive and exploitative industries, the load being shouldered is a heavy one.

## SUMMARY

Garland Allen (1999) demonstrated the relevance of the social context to scientific movements, in general, and in the recent momentum of genetic determinism, in specific. Combining new technologies with increasingly complex, highly technical models is a tempting cocktail in times of social unpredictability. What role, if any, have biological anthropologists played in the sewing of our social fabric? Should we even concern ourselves with such questions? I submit to you that we not only should but also have a responsibility to do so. After all, it is the context in which we teach, research, and write, and the power these endeavors possess in terms of shaping and affecting people's lives should not be wielded haphazardly. Furthermore, the overarching goals of our inquiries are slightly less than modest: understanding where our species came from, how we got from there to here, why we behave the way we do, and what is (are) our nature(s).

In the title of this piece, I raise the question: "Is our discipline strong and our cause just?" Clearly, in both theory and practice, biological anthropology is well served by the diversity and strength of its research approaches, methodologies, and practitioners as well as theoretical advancements within the field. With respect to the latter question, I submit that the preceding review provides evidence for increasing linkages (i.e., relevancy and responsibility) among the academic work of biological anthropologists, human societies, and primate communities worldwide. Whether consciously or not, professional training and practice in biological anthropology in 2008 equipped us with tools to investigate the causes and consequences of suffering and inequality.<sup>4</sup> Accepting this, I offer Richard Levins's insistence that the arrows of scientific endeavors be:

aimed at the creation of a just society compatible with a rich and diverse nature. We should not hide behind but rather undermine the cult of expertise in favor of approaches that combine professional and nonprofessional participation. The optimal condition for science is with one foot in the university and one in the communities in struggle, so that we have both the richness and complexity of theory coming from the particular and the comparative view and generalizations that only some distance from the particular can provide. [1996:111]

Biological anthropology, first and foremost a subdiscipline within anthropology, informs a professional and public discourse on the nature of our species, with very real implications for shaping the panoply of relationships within

our societies and between our species and the ecological communities within which we structure our livelihoods.

The scope and relevancy of biological anthropology, as evidenced by this review, is becoming increasingly "inter-subdisciplinary" and therefore interwoven with social, as well as evolutionary, theories. Indeed, in both his AAPA luncheon address and in a new book, *Evolution of Human Behavior* (2009), Agustín Fuentes advocates for multidisciplinary and multimethodological integration (within anthropology and beyond) as well as for engaging in our own political, religious, and social contexts. In conclusion, the contributions of evolutionary medical anthropology, anthropological neuroscience, forensic anthropology, primatology, and paleoanthropology in 2008, each in their own unique way, are guiding the efforts of biological anthropologists, in specific, and of anthropologists, in general, toward not only an elucidation of our past but also increased social saliency in the inevitable and continuous process of shaping and reshaping our future.

## IN MEMORIAM

Till o'er the wreck, emerging from the storm,  
Immortal Nature lifts her changeful form:  
Mounts from her funeral pyre on wings of flame,  
And soars and shines, another and the same.  
—Erasmus Darwin, *Botanic Garden* (pt. I, canto IV, l. 389)

I would like to conclude this article by paying tribute to the contributions of four prominent, recently deceased scholars, namely Professors Francis Clark Howell, William White Howells, Daris R. Swindler, and Charles Lockwood. For Howell, Howells, and Swindler, the past year brought forth remembrances in the form of published obituaries (Godfrey 2008; McHenry and Delson 2008; Siebert and Anemone 2008; Wood 2008) in the *American Journal of Physical Anthropology* and the *Yearbook of Physical Anthropology*. Lockwood suffered a tragic and premature death in a London motorcycle accident. For all, we mark not only the end of life but of well-rendered careers within our discipline. Their influence—in print and in person but most importantly in the insight passed down to generations of students—lives on.

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## NOTES

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2. As in much of anthropological writing, you are reading a fashioned text replete with my biases and filters as well as both temporal and spatial constraints that preclude a comprehensive review.

3. For a prime example of such incorporation, see Daniel H. Lende's (University of Notre Dame, 2008) contribution: "Evolution and Modern Behavioral Problems: The Case of Addiction." Lende insists on the recognition of humans as biocultural organisms and seeks the insight provided by actually living (behaving) individuals, as opposed to a strict reliance on theoretical frameworks of optimality and inclusive fitness (wherein population-level or gene-level processes as well as rigid, maximizing solutions are the focus of attention, whereas individuals exhibiting flexible behavioral patterns are frequently deprioritized or omitted). Theoretically, Lende's concern (one shared by evolutionary medicine in general) with environmentally sensitive (and shaped) processes of malfunction and discordance are fruitful avenues of insight into human behavior.

4. In this regard, the work of critical theorist Göran Therborn becomes salient. Therborn argues:

Social theorization depends upon the social world it theorizes. A major reason for studying the present is to understand the power that it exercises, and critiques of it are largely, if not absolutely, dependent on the hope of a possible different world. Such hope, in turn, depends on the visibility, however faint, of some alternative power or force with a potential to carry the critique forward into active change. [2007:65]

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